

ABSTRACT OF THE DISCLOSURE

A controller for a vector control of an induction motor, which is capable of easily determining a rotor resistance for use in calculation of a slip frequency. A temperature sensor is provided for detecting a temperature of a stator. Information on relation between the rotor temperature and the rotor resistance predetermined based on measurement is stored in a table. In driving the induction motor, the rotor resistance for the stator temperature detected by the temperature sensor is read from the table. A torque command I_2 is divided by a magnetic flux command Φ_2 and the obtained quotient is multiplied by the read value of the rotor resistance to obtain the slip frequency ω_s , so that the vector control is performed based on the obtained slip frequency ω_s . The value of the rotor resistance is easily determined by simply referring the table without complicated calculation. Since the stored information on the rotor resistance are based on measured values, a more precise value of the slip frequency is obtained to realize a precise vector control of the induction motor.